

Title (en)
Water heater with pressurized combustion

Title (de)
Wasserheizer mit unter Druck stehender Verbrennung

Title (fr)
Chauffe-eau avec combustion sous pression

Publication
EP 1681521 A3 20101124 (EN)

Application
EP 06250096 A 20060110

Priority
US 3413005 A 20050112

Abstract (en)
[origin: US7032543B1] A water heater includes a sealed combustion chamber and one or more fans for raising pressure in the combustion chamber to increase efficiency of the water heater. The pressure permits a more restrictive baffle to be used in the flue compared to baffles used in atmospheric water heaters. The water heater may include a water temperature sensor that activates the fan without activating the burner if water temperature raises above a desired temperature. The water heater may also include pressure and vapor sensors to ensure the combustion chamber is properly sealed and there are no flammable vapors present prior to igniting the burner. The fans are relatively small and run off the same DC power that runs an electric gas valve. The fans may be, for example, 12 or 24 Volt fans with power inputs of about 10 Watts or less.

IPC 8 full level
F24H 9/18 (2006.01)

CPC (source: EP US)
F24H 1/205 (2013.01 - EP US); **F24H 9/1836** (2013.01 - EP US)

Citation (search report)

- [XY] EP 0223691 A1 19870527 - GAZ DE FRANCE [FR]
- [X] GB 888113 A 19620124 - REGINALD PERCY FRASER O B E, et al
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- [Y] US 6508207 B2 20030121 - SHELLENBERGER TIMOTHY J [US], et al
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- [Y] US 4422844 A 19831227 - GRAHAM MARVIN M [US], et al
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Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
US 7032543 B1 20060425; CN 1873343 A 20061206; CN 1873343 B 20101027; EP 1681521 A2 20060719; EP 1681521 A3 20101124; US 2006150925 A1 20060713; US 2009250017 A1 20091008; US 7513221 B2 20090407

DOCDB simple family (application)
US 3413005 A 20050112; CN 200610004936 A 20060112; EP 06250096 A 20060110; US 32979306 A 20060111; US 41906509 A 20090406